

„Siersza” Mine – closed coal mine, in Siersza, in the county of Chrzanów, in the Lesser Poland Voivodeship.

### History

The origins of the mine date back to 1861 when the mine was launched under the name "New Izabela". In 1884 a new shaft "Artur" was launched, from which the mine took its name. In 1947, the "Zbyszek" mine was joined to it under the common name "Siersza". In 1951 it was connected to the "Krystyna" mine in Tenczyn. On November 1, 1999, the mine liquidation began, which was finally closed in 2001. Earlier, the Albrecht and Izabela mines operated in the "Siersza" region.

### Geology

In the geological structure participate Quaternary and Carboniferous deposits. Quaternary sediments are mainly associated with the Pleistocene hydrofluoric accumulation and, to a minor extent, with contemporary surface water activity (Holocene sediments). They are formed as clays often mixed with sands. Their thickness reaches several meters. Carboniferous deposits are represented in the upper part by the Libiąskie and Łaziskie strata. They are characterized by the vast majority of sandstones over claystones. In the Łaziskie layers and in the ceiling part of the Orzeskie layers there hard coal seams occur. The strata generally fall on SW. In terms of tectonics, the mining area is complex. A dense network of faults runs here, with general directions close to the meridian or NNE-SSW direction, and close to the latitudinal or NW-SE direction, which also include overburden formations. The main faults have a latitudinal course and they are:

- Sierszański I starting in the central part of the central field from the border fault and running east to the border of the "Siersza I" Mining Area. Throw of the layers towards N, amplitude from 40 m to 100 m. It runs south of the Zofia shaft and locally forms the northern boundary of exploitation of coal seams in Łaziskie layers (207, 208, 209, 210 and 214) and in Orzeskie layers (301 and 303).
- Sierszański II parallel to the Sierszański I fault, runs to N from the Sierszański I fault and from the Zofia shaft. In the area of the Zofia shaft, its throw reaches about 60 m to N. It constitutes the northern boundary of the exploitation of coal seams in the Central Field of the "Siersza" mine.
- fault close to latitudinal course and throw of about 20 m north limits the field of exploitation of seams in the Łaziskie and Orzeskie layers.

### Mining

In the mining area of “Siersza” seams 206 (previously designated as 118), 207, 208, 209, 210, 214 as well as 301 and 303 with thicknesses ranging from 3.0 m to about 11.0 m were exploited in the depth zone from 25 to 330 m below ground level.

### Sinkhole threat

Exists on the surface in the areas where the coal was extracted in the depth ranging from 0 to 100 m. Such exploitation was carried out in seams: 206/118, 207, 208, 209, 210, 214 (Łaziskie layers) and 301 (Orzeskie layers) mainly in the central part of the mining area in the NW-SE strip and in the SE corner of this area. In the central part of the mining area,

numerous discontinuous surface deformations related to shallow coal exploitation were observed in the past in the form of sinkholes and funnels caused by the reactivation of old shallow abandoned workings.